PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FR920030069/PCT	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP2004/052911	International filing date *(day/month/year)* 10.11.2004	Priority date *(day/month/year)* 10.12.2003

International Patent Classification (IPC) or both national classification and IPC
H04L29/06, G06F17/30

Applicant
INTERNATIONAL BUSINESS MACHINES CORPORATION et al.

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
27.09.2005	01.12.2005

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP2004/052911

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-7 as originally filed

Claims, Numbers

1-6 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-6
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-6
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

D1: GB-A-2 333 617 (IBM) 28 July 1999 (1999-07-28)

D2: ROSELI PERSSON HANSEN, CASSIA T. SANTOS, SÉRGIO CRESPO C. S. PINTO, G. L. LANIUS, F. MASSEN: "Web Services: An Architectural Overview" FIRST SEMINAR ON ADVANCED RESEARCH IN ELECTRONIC BUSINESS, [Online] 7 November 2002 (2002-11-07), pages 1-14, XP002313934 RIO DE JANEIRO, RJ - BRAZIL Retrieved from the Internet: URL:http://www.inf.unisinos.br/~webcompose j/Artigos/webservices.pdf>

2 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):

A method of redirecting a request for a web service in a data transmission network such as the Internet (D1, Figure 13), wherein, in response to a request forwarded by a host of a client browser to a web service provider (D1, Figure 13, ref 1), where the request is sent using the old address of the web service (D1, Figure 13, ref 503), responding to the client from the web service point associated with the old address by sending back a message comprising the new address redirection of the requested web service (D1, Figure 13, ref 2) and forwarding a second request from the client to the new address of said web service (D1, Figure 13, ref 5)

The subject-matter of claim 1 differs from this known method in that the web service provider provides a Web Service Definition Language (WSDL) file based upon a message exchange protocol such as SOAP on a transport protocol (for example HTTP) and where the new address in the response message is contained in the header of the used message exchange protocol.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as how can a redirection mechanism be provided for web services independent from the transport protocol.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

D1 discloses a redirect mechanism for XML documents using HTTP protocol only, whereas the present invention proposes a redirect mechanism for XML documents using SOAP messaging protocol. The redirection is not performed at the transport level (HTTP, jms, ect) but at the message level (SOAP for web services communication). The redirection mechanism of the current invention can be applied to all web services and is not limited to web services running on HTTP.

Document D2 explains how web services work. In view of D1 and D2, it would have been obvious for the skilled man to use the HTTP redirection mechanism for web services. The new and non-obvious aspect of the claimed invention is to adapt the HTTP (transport protocol) redirection concepts to SOAP (message protocol) to ensure a redirection for all web services. Since none of the prior art documents discloses the problem as mentioned, it would appear the subject-matter of claim 1 cannot be realised combining D1 and D2 without involvement of an inventive step.

3 The subject-matter of independent claim 4 corresponds with the subject-matter of claim 1 but defined in system features. Therefore, claim 4 is also considered to be novel and inventive.

4 Claims 2-3,5-6 are dependent on respectively claims 1 and 4 and as such also meets the requirements of the PCT with respect to novelty and inventive step.